

### **ABSTRACT OF THE DISCLOSURE**

A bearing seal assembly includes a pair segmented circumferential or a carbon ring seals to contain oil in the bearing compartments of a gas turbine engine or other mechanical device. The pair of seals, an oil-side seal and an air-side seal, are axially-spaced between the oil and the air in the housing. Air at an elevated pressure is introduced between the seals. This elevated air pressure urges the seals axially apart from one another and radially inward to improve the seal. A backup seal is provided adjacent either the oil-side seal or the air-side seal. In the event of failure of either the oil-side seal or the air-side seal which results in the loss of air pressure, the backup seal will provide at least a minimum level of seal between the oil compartment and the air in the housing.